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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/985,669	11/05/2001	Yoshitaka Hayashi	XA-9573	4070

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EXAMINER

ABDELNOUR, DENNIS J

ART UNIT	PAPER NUMBER
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3681

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/985,669

Applicant(s)

HAYASHI ET AL.

Examiner

Dennis J. Abdelnour

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-96 is/are pending in the application.
- 4a) Of the above claim(s) 12, 19, 27, 29-40, 48-64 and 75-94 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-18, 20-26, 28, 41-47, 65-74, and 95-96 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following action is in response to Amendment B received November 24, 2003, Paper No. 10. Claims 1-96 are pending.

Drawings

2. The drawings were received on November 24, 2003. These drawings have been accepted and placed in the file.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-11, 13-18, 20, 23-26, 41-47, 65-74, and 95-96 are rejected under 35 U.S.C. 102(b) as being anticipated by Cotterman (USPN 2,266,740).

Cotterman discloses a starter clutch mechanism in Figure 1 comprising a clutch housing 22, main clutch 23, auxiliary clutch 25, one-way clutch 99, and a planetary gear set.

An engine inputs a power through shaft 36 to flywheel 40. Main clutch 23 outputs a torque to a ring gear 101 through clutch actuator mechanism 80/85. Auxiliary clutch 25 outputs a torque to a carrier 66 upon which planet pinions 77 are mounted. One-way clutch 99 locks a reactive force from the sun gear 96 to stationary sleeve 92.

Main clutch 23 and auxiliary clutch 25 are configured as multi-plate clutches. The clutch-operating member is provided with six equally spaced cylinders, each provided with a

piston. Three of these pistons are control the main clutch 23, while the other three control the auxiliary clutch 25. In addition, the fastening of main clutch 23 and auxiliary clutch 25 generates an amplified torque to the transmission. Carrier 66 is secured by splines 68 to the output shaft 70 to rotate therewith. The transmission includes an inherent "no-back" feature, wherein no part of the transmission gear may rotate backwardly, which acts as a hill-holder.

The main shaft 70 is rotatable in the end of the crank shaft 36 in a bearing bushing 69. Rotatable hub 85 is provided with a press fitted bearing bushing 88 while a second bearing bushing 89 is press fitted over the stationary hub 66. A bearing bushing 95 is press fitted into sleeve 92 to rotatably support the main shaft 70. Near the forward end of the sleeve 92, a sun gear 96 is rotatable on the bearing bushing 98.

The planetary gear in the starter clutch only comes into action when the auxiliary clutch 25 is not fully engaged. In other words, the engagement of the auxiliary clutch 25 facilitates a bypass of the planetary gear arrangement, and a transmission ratio of one to one. The disengagement or partial engagement of the auxiliary gear 25 acts to facilitate different transmission ratios based upon the degree of engagement.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cotterman in view of Matsuoka (USPN 5,846,153).

Cotterman has been described above in the 102(b) rejection. Cotterman does not include a damper assembly.

Matsuoka discloses damper assembly 21 in Figure 1. Damper assemblies are well known in the art of power transmissions, used primarily for reducing transmission vibrations.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Cotterman to include a damper assembly as taught by Matsuoka in order to reduce driveline vibrations.

7. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cotterman in view of Teske et al. (USPN 4,637,272).

Cotterman has been described above in the 102(b) rejection. Cotterman does not include a ball-screw actuator.

Teske et al. discloses a ball-screw actuator device, and states in the background of the invention, "ballscrew actuators have been used for achieving relative movement between and positioning of members in many different environments...". See col. 1, lines 22-24.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Cotterman by using a ball-screw actuator as the means to engage the clutch means as taught by Teske in order to more accurately position the piston means.

Response to Arguments

8. Applicant's arguments filed November 24, 2003 have been fully considered but they are not persuasive.

Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

It is believed that each of the limitations as claimed are met by the prior art references and are pointed out above in the 102 and 103 rejections.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,


however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis J. Abdelnour whose telephone number is (703) 305-5309. The examiner can normally be reached on Monday-Friday, 8:00-5:30, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (703) 308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dja

February 23, 2004


CHARLES A. MARMOR
SUPERVISORY PATENT EXAMINER
ART UNIT 3681